

REMARKS

Claims 1-23, 25-29, 31-36, 38-43, 45-57, and 59-74 are pending, of which claims 1, 3, 5, 7, 9, 11, 13, 15, 17, 18-23, 66, and 74 are independent. Claim 74 is added by virtue of this Amendment, and claims 24, 30, 37, 44, and 58 are hereby cancelled.

Claims 21, 43-50, 57, and 64 are rejected under 35 U.S.C. 112(2) as being indefinite. Claims 1, 2, and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. No. 6,236,064 to Mase (Mase) in view of U.S. No. 5,585,658 to Mukai (Mukai) and U.S. No. 5,403,772 to Zhang (Zhang). Finally, claims 38, 57, and 59 are objected to for failing to further limit the subject matter of a previous claim.

Claims 3-20, 22, 23, 25-29, 31-36, 38-42, 51-56, 59-63, 65-67, and 69-73 are allowed. Claim 43, if amended to include all of the limitations of its respective base claim and any intervening claims, would be allowable but for its rejection under 35 U.S.C. 112(2). Claims 21 and 44-50 would be allowable but for their rejection under 35 U.S.C. 112(2).

Applicant thanks the Examiner for indicating the presence of allowable subject matter in allowed claims 3-20, 22, 23, 25-29, 31-36, 38-42, 51-56, 59-63, 65-67, and 69-73, as well as in claims 21 and 43-50. Also in this regard, Applicant notes the presence of an apparent error in paragraphs 10 and 11 of the Office Action. Specifically, paragraph 10 states that claim 51 would be allowable if re-written to include all of the limitations of its respective base claim and any intervening claims, and but for its rejection under 35 U.S.C. 112(2). However, claim 51 is indicated as being allowed in paragraph 9. Additionally, paragraph 11 refers to claims 21 and 44-50, but it appears that claims 57 and 64 were omitted from this listing. In short, it appears that, in addition to the claims listed above, claims 57 and 64 contain allowable subject matter but for their rejection under 35 U.S.C. 112(2).

Regarding the objections to claims 38 and 59, Applicant notes that these claims' respective independent claims 20 and 23 recite that the claimed widths W_{pi} , W , and W_{pa} have the relationships that $W_{pi}/W = 0.1$ to 0.9 , and $W_{pa}/W = 0.1$ to 0.9 . Dependent claims 38 and 59 further limit claims 20 and 23, respectively, such that the relationships require $W_{pi}/W_{pa} = 1/9$ to 9 . That is, a third relationship is imposed on the required widths.

Regarding the claim objection to claim 57, Applicant notes that this claim's independent claim 22 does not require that the claimed impurity elements are one of carbon, nitrogen, and oxygen, as recited in dependent claim 57.

As a result, Applicant respectfully submits that the objections to claims 38, 57, and 59 are improper, and requests that they be withdrawn.

Regarding the rejections of claims 21, 43-50, 57, and 64 under 35 U.S.C. 112(2), Applicant respectfully submits that these rejections are obviated by the amendments to those claims included with this Amendment. In accordance with paragraphs 10 and 11 of the pending Office Action, as discussed above, claims 21, 44-50, 57, and 64 are believed to be in condition for allowance.

Regarding the rejection of claims 1, 2, and 68 under 35 U.S.C. 103(a) as being unpatentable over Mase in view of Mukai and Zhang, Applicant respectfully submits that the applied references, whether taken alone or in combination, fail to disclose or properly suggest all of the elements recited in amended independent claim 1.

For example, amended independent claim 1 recites: "forming an intrinsic or substantially intrinsic region and impurity regions in said part to become the channel forming region by introducing a first impurity into said channel forming region through said resist having said dotted hole, said first impurity being selected from the group consisting of carbon, nitrogen and oxygen ... wherein said source region and said drain region and said channel forming region are provided in a transistor of at least one selected from the group consisting of an arithmetic operating section, a memory section, a DRAM circuit and an SRAM circuit."

In Mase, however (specifically, in the cited portion of column 5, lines 27-40), oxygen, carbon, or nitrogen ions are implanted **only** into parts of the channel formation regions of the TFTs forming **pixels** (at a dopant concentration of 5×10^{19} to 5×10^{21} ions/cm³), for the purpose of decreasing a sensitivity to light of the (pixel) display section.

In contrast, in amended claim 1, a first impurity selected from the group consisting of carbon, nitrogen and oxygen is introduced into the channel forming region through the resist having the dotted hole in order to prevent a short channel effect, and the channel forming region, the source region, and the drain region are provided **not** in a pixel section, as in Mase, but rather

in a transistor of at least one selected from the group consisting of an arithmetic operating section, a memory section, a DRAM circuit and an SRAM circuit.

As a result, Applicant respectfully submits that Mase neither discloses nor properly suggests all of the limitations of amended independent claim 1. Moreover, Applicant submits that neither Mukai nor Zhang discloses the above-discussed features, nor would those references have motivated one of ordinary skill in the art at the time of the invention to modify Mase to obtain all of the features recited in amended independent claim 1. In particular, neither Mukai nor Zhang properly suggests that an intrinsic or substantially intrinsic region and impurity regions are formed in the part to become the channel forming region by introducing carbon, nitrogen or oxygen into the channel forming region through the resist having the dotted hole.

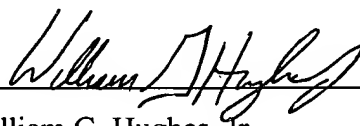
Similarly, Applicant respectfully submits that none of the prior art of record discloses or properly suggests all of the features of newly-added independent claim 74.

Based on the above, all of pending claims 1-23, 25-29, 31-36, 38-43, 45-57, and 59-74 are believed to be in condition for allowance, and such action is hereby requested in the Examiner's next official communication.

Enclosed is a \$110.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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